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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/029,174	BOIOCCHI ET AL.	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *35-77* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *35-50,52 and 54-77* is/are rejected.

7)☒ Claim(s) *51 and 53* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *030305*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3-3-05 has been entered.

2) The amendment filed 3-3-05 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In the abstract, the subject matter of "The blocks of the central region are delimited by, separated by, and/or adjacent to the first circumferential groove, the second circumferential groove, one or more additional circumferential grooves, one or more transverse grooves, and/or one or more annular projections." is new matter. This sentence, which has no explicit basis in the original disclosure, redefines the invention in a manner not contemplated by the original disclosure. It describes new combinations which were not reasonably conveyed by the original disclosure. For example: Where is the support for blocks delimited by two annular projections and one transverse groove? Furthermore, it is not seen how the tread pattern of figure 2 and the tread pattern of figure 5 supports the above noted sentence.

Applicant is required to cancel the new matter in the reply to this Office Action.

3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Sasaki

5) **Claims 60, 64-66, 72-73 and 76 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sasaki (JP 8-11508).**

See figure. The claimed tire construction including the beads and the claimed carcass having at least one ply is inherent in Sasaki's pneumatic tire. In any event: It would have been obvious to one of ordinary skill in the art to provide Sasaki's pneumatic tire with the claimed carcass comprising at least one ply and beads since it is taken as well known / conventional in the tire art to provide a pneumatic tire with a carcass having at least one carcass ply and beads.

Himuro

6) **Claims 60, 64-67 and 73 are rejected under 35 U.S.C. 102(b) as being anticipated by Himuro (JP 63-61606).**

Himuro discloses a pneumatic radial tire comprising a tread including a central area (central region) having width TWC and side areas (shoulder regions) each having a width TWS. The central region comprises blocks 40. Each shoulder region comprises blocks 40. The blocks 40 in the shoulder region are joined to each other by joined parts 50. As can be seen from figure 1, the joined parts 50 define a "continuous track" having a continuous lateral wall. During a partial oral translation of Himuro by a PTO translator, the following information was obtained: At page 4 upper left, Himuro discloses that this center region Tc should be predetermined within 30-50% of tread width. Hence, the central region has a width of 30-50% of the tread width TW. The sum of the shoulder regions therefore is 50-70% of the tread width (overlapping the range of less than or equal to 60% of overall width). Since Himuro shows the shoulder regions as having the same width, the width of each shoulder region is 25-35% of tread width (falling within the range of not less than 20% of overall width). The tire has a size of 225/50R16 (low aspect ratio of 50%) and is therefore a high performance tire as claimed. See tire size at lower left of page 4. The embodiment of figure 2 comprises rows of central blocks and a rib R (central annular protrusion).

The claimed tire is anticipated by Himuro's pneumatic radial tire. The claimed tire construction including the carcass comprising at least one carcass ply and beads is inherent in Himuro's pneumatic radial tire. The claimed joined shoulder blocks read on the joined shoulder blocks in figure 2; it being emphasized joined parts 50 form a "circumferential portion" as claimed. The claimed annular protrusion reads on the rib R. With respect to the claimed rows of central blocks, a row of central blocks is provided

between the joined shoulder blocks and the rib R. The first to fourth circumferential grooves read on the circumferential grooves 20_1, 10_1, 10_2 and 20_2.

7) **Claims 60-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 (EP 790143).**

Himuro is considered to anticipate claim 60. In any event: As to claim 60, it would have been obvious to one of ordinary skill in the art to provide Himuro's pneumatic radial tire with a carcass comprising at least one carcass ply and beads since Europe 143 suggests providing such tire construction for a pneumatic radial tire so that the tire can function as a tire for a passenger car.

As to claims 60-63, Europe 143 suggests using a belt having plies 7A, 7B each having parallel steel cords embedded in rubber (the cords in one ply crossing the cords in the other ply) and a band 9A having zero degree cords. Europe 143 motivates one of ordinary skill in the art to use this specific construction in Himuro so that high speed durability and cornering performance are improved.

As to claims 64-66, note the transverse grooves separating the central blocks.

As to claim 67, Himuro discloses that the center region Tc should be predetermined within 30-50% of tread width. Hence, the central region has a width of 30-50% of the tread width TW. The sum of the shoulder regions therefore is 50-70% of the tread width (overlapping the claimed range of less than or equal to 60% of overall width). Since Himuro shows the shoulder regions as having the same width, the width of each shoulder region is 25-35% of tread width (falling within the claimed range of not less than 20% of overall width).

8) **Claims 68 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 as applied above and further in view of Japan '704 (JP 60-193704) or Croyle et al (US 5529101).**

As to claim 68, it would have been obvious to one of ordinary skill in the art to provide the circumferential grooves of Himuro's pneumatic radial tire such that the outer wall is inclined more than the inner wall in view of (a) Japan '704's suggestion to incline the outer wall of a circumferential groove of a pneumatic radial tire at an angle beta greater than the angle alpha of the inner wall to improve drainage or (b) Croyle et al's suggestion to incline the outer wall of a circumferential groove of a high performance tire more than the inner wall to achieve an increase in lateral stiffness without reducing circumferential groove area.

As to claim 69, the claimed angles for the circumferential groove would have been obvious and could have been determined without undue experimentation in view of (a) Japan '704's suggestion to incline one wall at an angle beta of 10-30 degrees and to incline the other wall at an angle alpha of 0-5 degrees such that the resulting *asymmetrical* circumferential groove, which has rounded bottom edges, improves drainage or (b) Croyle et al's suggestion to incline the walls such that an angular variation of 6-20 degrees is defined so that the resulting *asymmetrical* circumferential groove which has round bottom edges, achieves an increase in lateral stiffness without reducing circumferential groove area.

9) **Claims 70 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 as applied above and further in view of Japan '106 (JP 4-143106) and/or Japan '105 (JP 11-1105).**

As to claims 70 and 71, it would have been obvious to one of ordinary skill in the art to provide the transverse grooves in the central region of Himuro's high performance tire such that the bottom wall has a variable depth including an inclined profile decreasing towards one of the circumferential grooves in view of (1) Japan '106's teaching to use a curved convex bottom for transverse grooves such that the inclined profile decreases from the middle of the transverse groove towards one of the circumferential grooves so as to suppress noise without sacrificing wettability (figure 3b) and/or (2) Japan '105's teaching to use a curved bottom for transverse grooves in a high performance tire (225/50R16) having improved straight running stability such that the inclined profile decreases from one circumferential groove to the other circumferential groove (figure 3). With respect to inclined profile decreasing, claim 71 fails to require the profile to decrease along the entire length of the transverse groove and thereby fails to require groove bottom different from that suggested by Japan '106. In any event: the claimed groove bottom is considered to clearly read on the groove bottom illustrated by Japan '105 in figure 3.

10) **Claim 77 is rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 and in view of Japan '704 or Croyle et al as applied above and further in view of Japan '106 and/or Japan '105.**

As to claim 77, Japan 106 and Japan 105 are applied for the same reasons given for claims 70 and 71.

11) **Claims 72-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 as applied above and further in view of Schomburg (US 6478062).**

As to claim 72, it would have been obvious to provide at least one of the shoulder blocks with a transverse sipe since Schomburg, also showing a non-directional tread having joined shoulder blocks, suggests forming cuts (sipes) in the tread including the joined shoulder blocks to improve traction.

As to claims 73-75, it would have been obvious to provide Himuro's center blocks between the joined shoulder blocks and the central rib with a cusp shape / semiparabolic shape since Schomburg, also showing a non-directional tread having joined shoulder blocks, suggests that central blocks between joined shoulder blocks and a central rib may have a cusp shape / semiparabolic shape as shown in figure 1. As to claim 75, Himuro teaches using joined blocks on both sides of the tire and Schomburg suggests provide the central annular protrusion with a half-harmonic course as shown in figure 1 for each row of joined shoulder blocks.

12) **Claim 76 is rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 as applied above and further in view of Europe 332 (EP 627332).**

As to claim 76, it would have been obvious to use two ribs instead of one rib and thereby provide a circumferential recess in the central annular protrusion as claimed

since Europe 332 suggests providing the central region of a non-directional tread with two ribs instead of one rib (col. 5 lines 38-54)

13) **Claims 35-43, 49-50, 52, 54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 as applied above and further in view of Kuze et al (US 5016695) and Japan 912 (JP 08-197912).**

As to claims 35-43, 49-50, 52, 54 and 56, it would have been obvious to one of ordinary skill in the art to provide the central area of Himuro's tread with three block rows (two outer rows, one inner row) and two ribs (two annular protrusions) as claimed in view of (1) Kuze et al's suggestion to use a tread pattern as shown in figure 1, which has a central area including three block rows and at least one rib, to improve driving stability during cornering and to improve riding comfort and (2) Japan 912's suggestion to use a tread pattern as shown in figure 1, which has a central area including three block rows and two ribs instead of one rib.

14) **Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 and in view of Kuze et al and Japan 912 as applied above and further in view of Japan '704 (JP 60-193704) or Croyle et al (US 5529101).**

As to claims 44 and 45, Japan 704 and Croyle are applied for the same reasons given for claims 68 and 69.

15) **Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 and in view of Kuze et al and Japan 912 as applied above and further in view of Japan '106 and/or Japan '105.**

Japan 106 and Japan 105 are applied for the same reasons given for claims 70 and 71.

16) **Claims 48 and 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 and in view of Kuze et al and Japan 912 as applied above and further in view of Great Britain 795 (GB 1212795).**

As to claims 48 and 57-59, it would have been obvious to one of ordinary skill in the art to add the claimed sipes to the connected "shoulder blocks" of Himuro since Great Britain 795 suggests adding transverse sipes 36 to connected shoulder blocks for enhancing grip.

17) **Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Europe 143 and in view of Kuze et al and Japan 912 as applied above and further in view of Ushikubo et al (US 4947911).**

As to claim 55, it would have been obvious to one of ordinary skill in the art to provide the blocks of the first row with a circumferential recess in view of Ushikubo et al's suggestion to form a shallow circumferential recess in blocks adjacent a shoulder region to prevent blow out.

Allowable Subject Matter

18) **Claims 51 and 53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

Although an asymmetric tread pattern including central block which are approximately semiparabolic shaped is known per se as shown by Schomburg, there is

no motivation to *further modify* Himuro such that the resulting tread comprises the inner central blocks being "approximately semiparabolic-shaped" (claim 51) or the first circumferential groove comprising a "half-wave harmonic course" (claim 53) *in combination with* the limitations of claim 35.

Remarks

19) Applicant's arguments with respect to claims 35-50, 52 and 54-77 have been considered but are moot in view of the new ground(s) of rejection.

20) Kumho (cited by applicant / dated 6-9-04) is of interest for showing a central region having two block rows and three annular protrusions.

21) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
May 29, 2005

Steven D. Maki 5-29-05
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